INSTALLATION INSTRUCTIONS for HEALY SYSTEMS, INC. CLEAN AIR SEPARATOR

The Model 9942, Healy Systems Clean Air Separator Installation consists of a 400 gallon steel tank assembly (9961) that contains a fuel resistant bladder to contain excess gasoline vapors that may develop in gasoline storage tanks during idle periods of gasoline dispensing facility operation. The tank assembly weighs approximately 800 pounds which makes it necessary to have a power assisted lifting device available at the installation site to remove the tank from the transportation vehicle and place it on the required concrete pad (see drawing B9900-9945). The pad (level within 1/8"/foot) is located within 100 feet to the storage tank vent lines. The pad is a requirement of this installation. DO NOT PLACE THE TANK DIRECTLY ON THE GROUND OR ASPHALT SURFACE. NOTICE: The installer is responsible to ensure that the installation meets the latest edition requirements of NFPA 30A, Chapter 10. No electrical connections are required. The tank securement method shown in drawing B9900-9945 shall be approved by the local authority having jurisdiction with respect to wind and seismic loading.

In addition to the tank, there is a hardware kit that contains the following:

1 Pressure/Vacuum vent valve (See Exhibit 1 of VR-201-A for model number)
4 Locking 1" NPT Ball Valves
4 Pad locks (keyed alike)
1 Breather Assembly, Healy Model 9948
1 Vapor Inlet Assembly, Healy Model 9956
1 Float Check Valve Assembly, Model 9466G

Reference the appropriate Healy Systems installation drawing (C9900-9942, C9900-9971, C9900-9972 or C9900-9973 of this manual) for placement of the above parts for the vent stack configuration required by the local Authority Having Jurisdiction (AHJ) for the UST system. The local contractor is responsible to provide all necessary, galvanized piping, non-hardening, UL classified pipe joint compound and plumbing fittings. Additional Pressure/Vacuum (P/V) vent valves to complete installation are not included in the hardware kit. Healy is not responsible for the warranty of any other P/V vent valve purchased to complete installation.

The tank arrives at the site assembled and tested. All plumbing should be done using 1" galvanized steel pipe (Schedule 40) and approved nipples, as called out in the installation drawing appropriate for the site installation. Mounting hardware should be galvanized or stainless steel. Careful attention must be paid to the installation drawing appropriate for the site installation to assure proper operation of the bladder system. Do not inflate the bladder assembly after installation.

It is important that the tank be secured to the concrete pad as shown in drawing B9900-9945 of this manual to prevent any unintentional repositioning of the tank as the connecting plumbing to the vent system is accomplished.

OPERATION AND PURGING

NORMAL OPERATION:

- There are four ball valves on the tank. In normal operation, only the valve at the top of the tank shall be open – the other three valves shall be closed. All four valves shall be locked in the above positions. The two plugs should be installed using a non-hardening, UL classified pipe joint compound and tightened to 60 ft-lbs.

DRAINING THE BLADDER:

- An inspection of the need to drain the bladder is easily made by removing the plug at the tee on the bottom plumbing of the tank – be sure to have a metal container available to catch fluid. With the plug removed and the container in place, carefully open the ball valve above the tee to release any liquid. Any liquid coming over from the vent system would have collected above the valve in the riser pipe before going into the bladder. If liquid in excess of 16 ounces drains out, the bladder should also be drained. Use caution as the storage tanks could be pressurized.

- Should it be necessary to drain the bladder:
    1. Close the upper ball valve (usually open) leading to the tank vent lines.
    2. Open the valve that goes to the vertical riser that enters the top of the tank (the one without the ball valve going into the tank). Be sure the other three ball valves that connect to the vent lines and tank are closed.
    3. Remove the plug from the bottom tee and connect an explosion proof evacuation pump capable of handling liquid. Have a liquid tight, metal container to receive any fluid that may exit the system and start the pump. If no liquid return within 30 seconds, the bladder is dry – discontinue pumping, remove the pump, replace the plug and return the ball valves to their original, locked, positions.

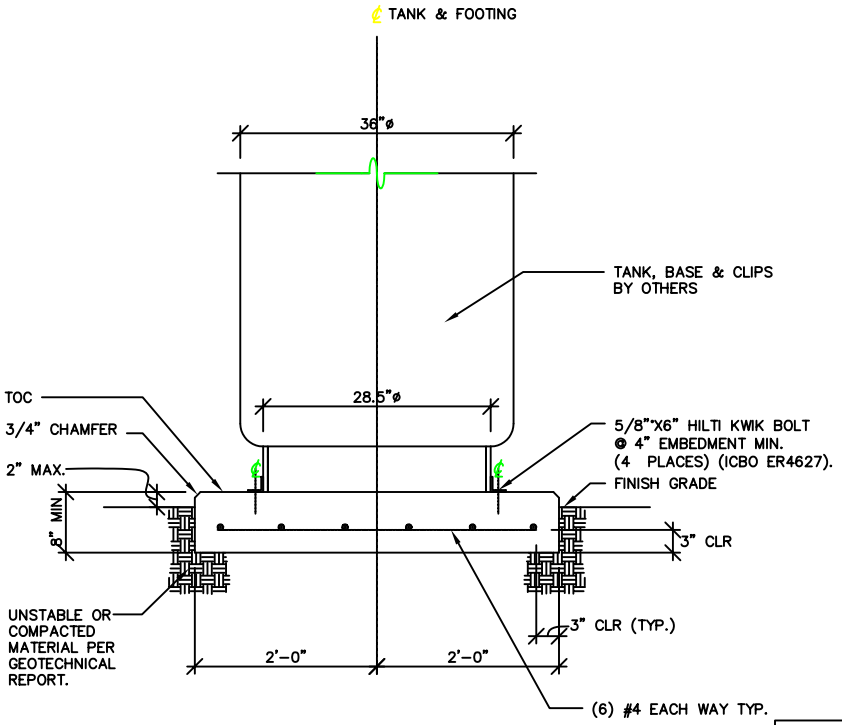
DRAINING THE TANK:

- Should it be necessary to drain the tank (between the bladder and steel wall):
    1. Close the ball valve at the top of the tank and also the two valves on the vertical risers.
    2. Remove the plug in the bottom tee and place a metal container below the pipe opening.
    3. Carefully open the ball valve at the bottom of the tank – observe that the container that is being drained into does not overflow – empty container as required until fluid no longer comes from the pipe when the valve is open.
    4. Close the ball valve and replace the plug into the tee.
    5. Return all ball valves to their original locked positions.

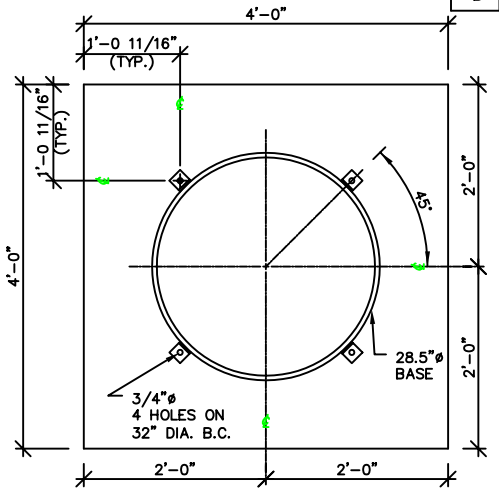
DWG NO 9900-SLAB SH –

REVISIONS				
REV	DESCRIPTION	DATE	BY	APP
A	ORIG. ISSUE	7/31/02	JWH	
B	ø3/4 WAS 11/16, 3X3 CLIP WAS 2X2	10 14 04	JWH	

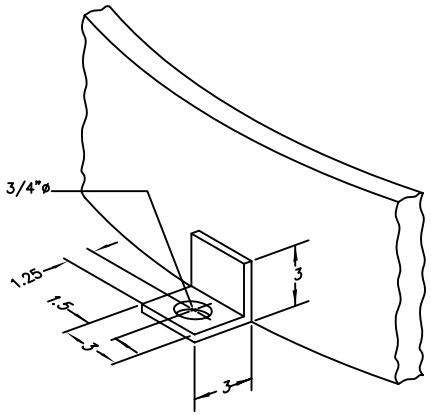
CRITERIA
SOIL BEARING = 1000 psf ADJ.
SEISMIC ZONE 4 Na=1.5
Ca=0.44Na



SECTION @ TANK SLAB
SCALE = 3/4" = 1'–0"



BASE PLAN
SCALE = 3/4" = 1'–0"



TYPICAL HOLD DOWN CLIP
SCALE = NONE

NOTES:
MIN. CONCRETE COMP STRENGTH = 2500 psi
MIN. REINF. YIELD STRENGTH = 40000 psi

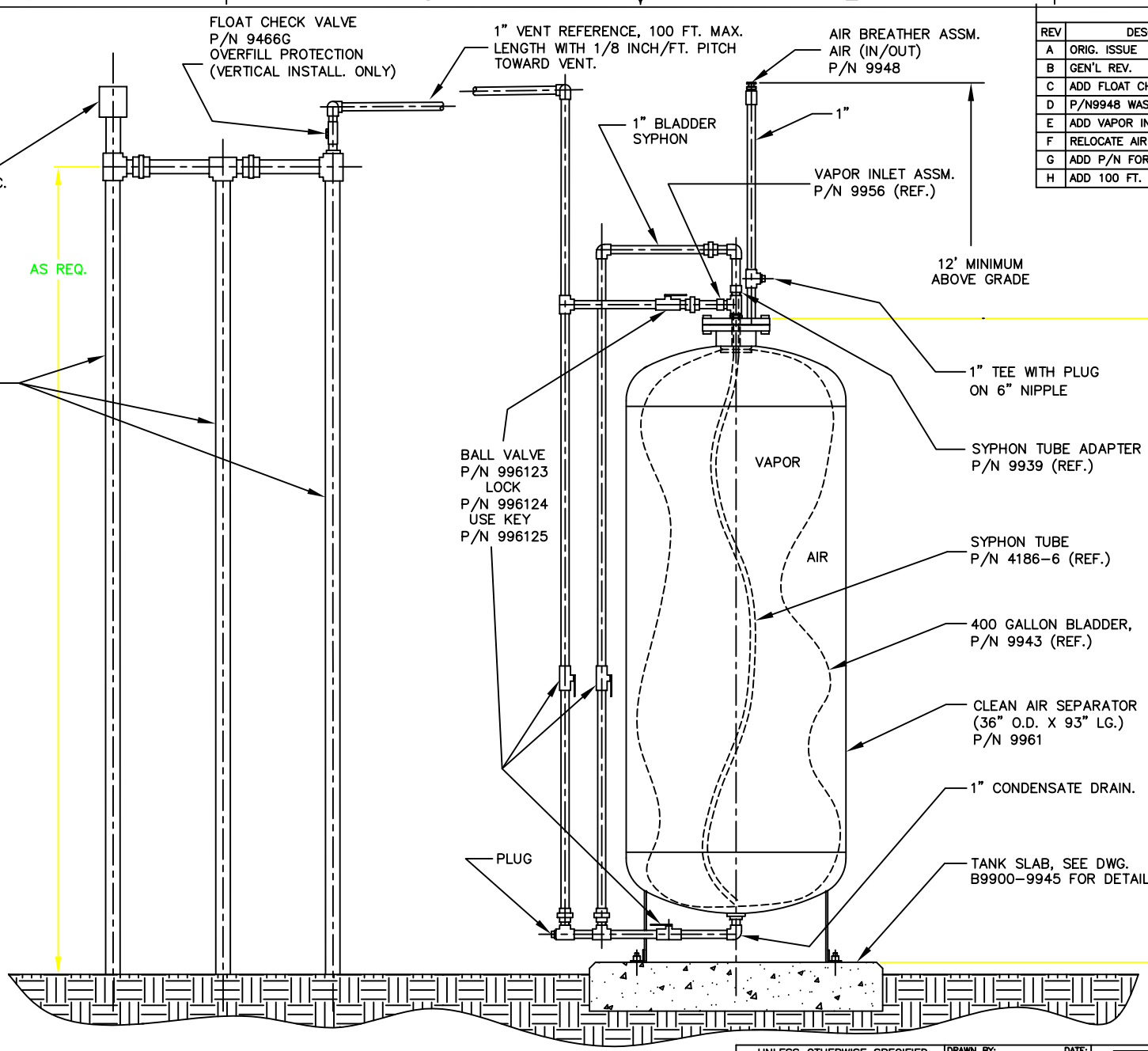
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN UNITS
DIMENSIONS APPLY AFTER PROCESSING
TOLERANCES
.X = ±.1
.XX = ±.01
.XXX = ±.005
X/X = ±1/64
ANGLES = ±1/2°
SURFACE FINISH: SF √
INTERPRET DIM AND TOL PER ANSI Y14.5M – 1982
REMOVE ALL BURRS AND SHARP EDGES

DRAWN BY: JWH DATE: 7/31/02
CHECKED BY: – DATE: –
MATERIAL: –
TREATMENT: –
THIRD ANGLE PROJECTION

HEALY SYSTEMS, INC.
17 Hampshire Drive
Hudson, New Hampshire 03051

DWG TITLE
CLEAN AIR TANK
MOUNTING SLAB DETAILS

SIZE B | DWG NO. 9900-9945 | REV B
SCALE: 3/4" = 1'–0" | SHEET – OF –



REVISIONS			
REV	DESCRIPTION	DATE	APP
A	ORIG. ISSUE	5/14/02	JWH
B	GEN'L REV.	8/5/02	JWH
C	ADD FLOAT CHECK P/N 9466F	8/22/02	JWH
D	P/N9948 WAS 9932	1/13/03	JWH
E	ADD VAPOR INLET ASSM. P/N 9956	11/14/03	JWH
F	RELOCATE AIR BREATHER, P/N 9948	4/20/04	JWH
G	ADD P/N FOR LOCK, KEY & BALL VAL.	6/25/04	JWH
H	ADD 100 FT. MAX. OPTION	11/8/04	JWH

NOTE:
1–ALL BALL VALVES (B.V.) TO BE UL LISTED AND HAVE PADLOCK FEATURE.
2–PASSIVE TANK PRESSURE CONTROL–NO ELECTRICAL POWER REQUIRED.
3–AIR BREATHER MUST BE INSTALLED AT A MINIMUM HEIGHT OF 12' ABOVE GRADE.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS APPLY AFTER PROCESSING

TOLERANCES
.X = ±.1
.XX = ±.01
.XXX = ±.005
X/X = ±1/64
ANGLES = ±1/2°
SURFACE FINISH: 125 SF

INTERPRET DIM AND TOL PER ANSI Y14.5M – 1982

REMOVE ALL BURRS AND SHARP EDGES

DRAWN BY: JWH DATE: 5/14/02
CHECKED BY: DATE:
MATERIAL: –
TREATMENT: –
THIRD ANGLE PROJECTION

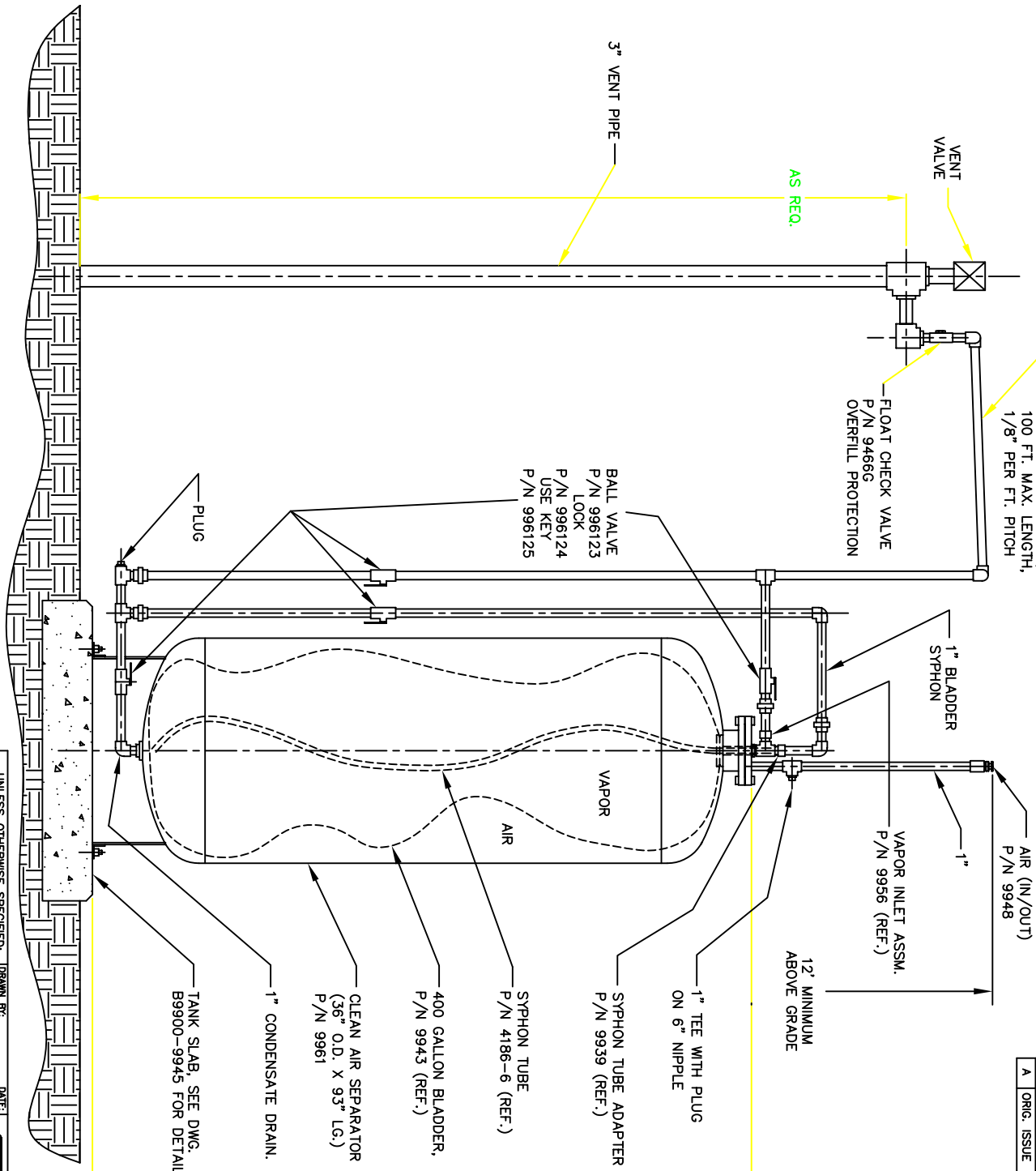
HEALY SYSTEMS, INC.
17 Hampshire Drive
Hudson, New Hampshire 03051

DWG TITLE
CLEAN AIR SEPARATOR
INSTALLATION

SIZE C | DWG NO. 9900-9942 | REV H

SCALE: 1" = 1 FOOT | SHEET 1 OF 1

DWG NO 9900-9942 SH 1



NOTE:
1–ALL BALL VALVES (B.V.) TO BE UL LISTED AND HAVE PADLOCK FEATURE.
2–PASSIVE TANK PRESSURE CONTROL–NO ELECTRICAL POWER REQUIRED.
3–AIR BREATHER MUST BE INSTALLED AT A MINIMUM HEIGHT OF 12' ABOVE GRADE.

REVISIONS			
REV	DESCRIPTION	DATE	APP
A	ORIG. ISSUE	3/14/05	JWH

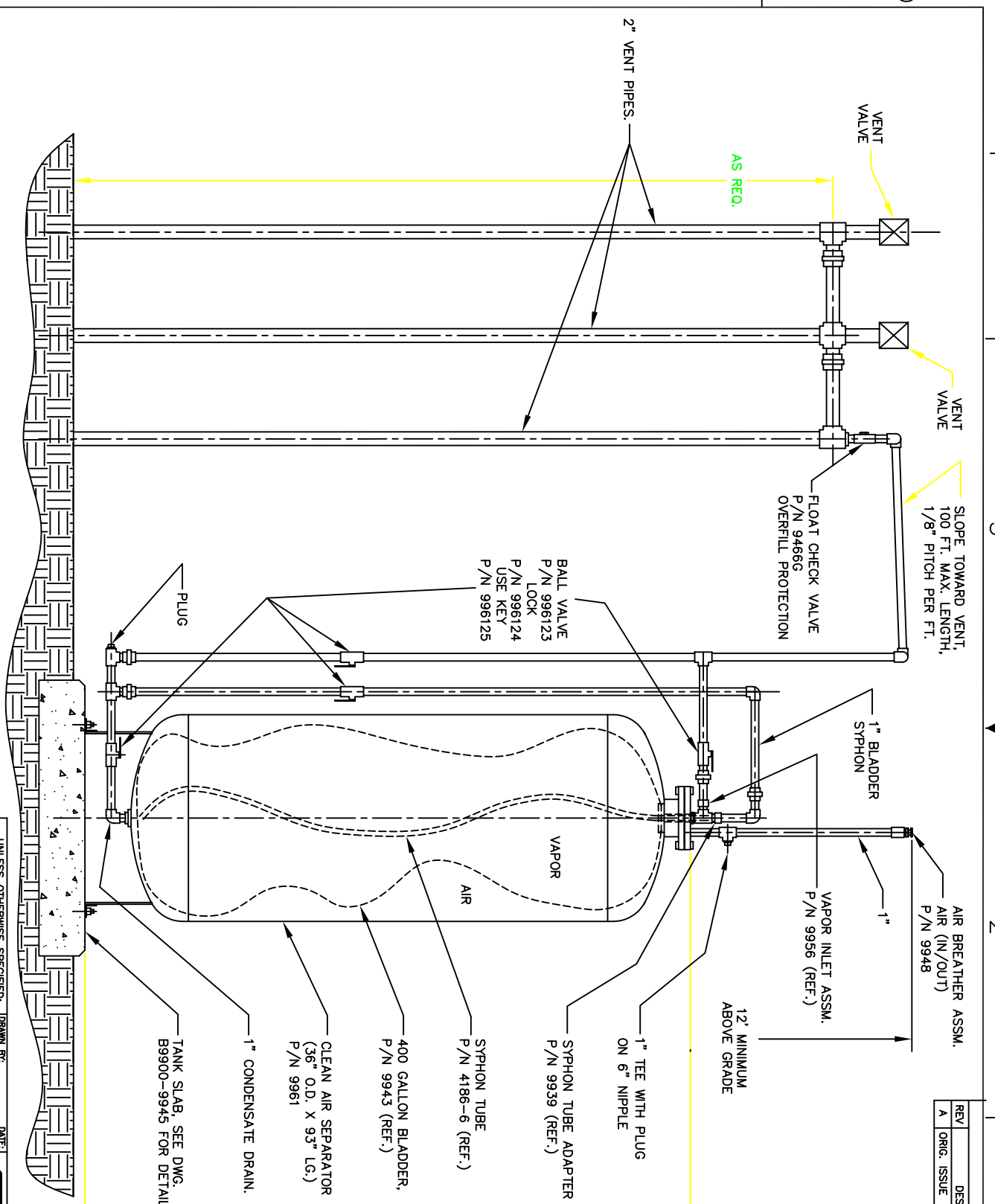
UNLESS OTHERWISE SPECIFIED: DIMENSIONS APPLY AFTER PROCESSING
TOLERANCES
.X = ±.1
.XX = ±.01
.XXX = ±.005
ANGLES = ±1/2°
SURFACE FINISH: 125
INTERPRET DIM AND TOL PER ANSI Y14.5M – 1982
REMOVE ALL BURRS AND SHARP EDGES
DRAWN BY: JWH DATE: 5/14/02
CHECKED BY:
MATERIAL: –
TREATMENT: –
THIRD ANGLE PROJECTION

HEALY SYSTEMS, INC.
17 Hampshire Drive
Hudson, New Hampshire 03051

DWG TITLE CLEAN AIR SEPARATOR INSTALLATION (1 VENT VALVE)

SIZE C | DWG NO. 9900-9971 | REV A
SCALE: 1" = 1 FOOT | SHEET 1 OF 1

DWG NO 9900-9971 | SH 1



NOTE:
1–ALL BALL VALVES (B.V.) TO BE UL LISTED AND HAVE PADLOCK FEATURE.
2–PASSIVE TANK PRESSURE CONTROL–NO ELECTRICAL POWER REQUIRED.
3–AIR BREATHER MUST BE INSTALLED AT A MINIMUM HEIGHT OF 12' ABOVE GRADE.

REVISIONS			
REV	DESCRIPTION	DATE	APP
A	ORIG. ISSUE	3/14/05	JWH

UNLESS OTHERWISE SPECIFIED: DIMENSIONS APPLY AFTER PROCESSING
TOLERANCES
.X = ±.1
.XX = ±.01
.XXX = ±.005
ANGLES = ±1/2°
SURFACE FINISH: 125
INTERPRET DIM AND TOL PER ANSI Y14.5M – 1982
REMOVE ALL BURRS AND SHARP EDGES
THIRD ANGLE PROJECTION
DRAWN BY: JWH 5/14/02 DATE:
CHECKED BY: DATE:
MATERIAL: –
TREATMENT: –

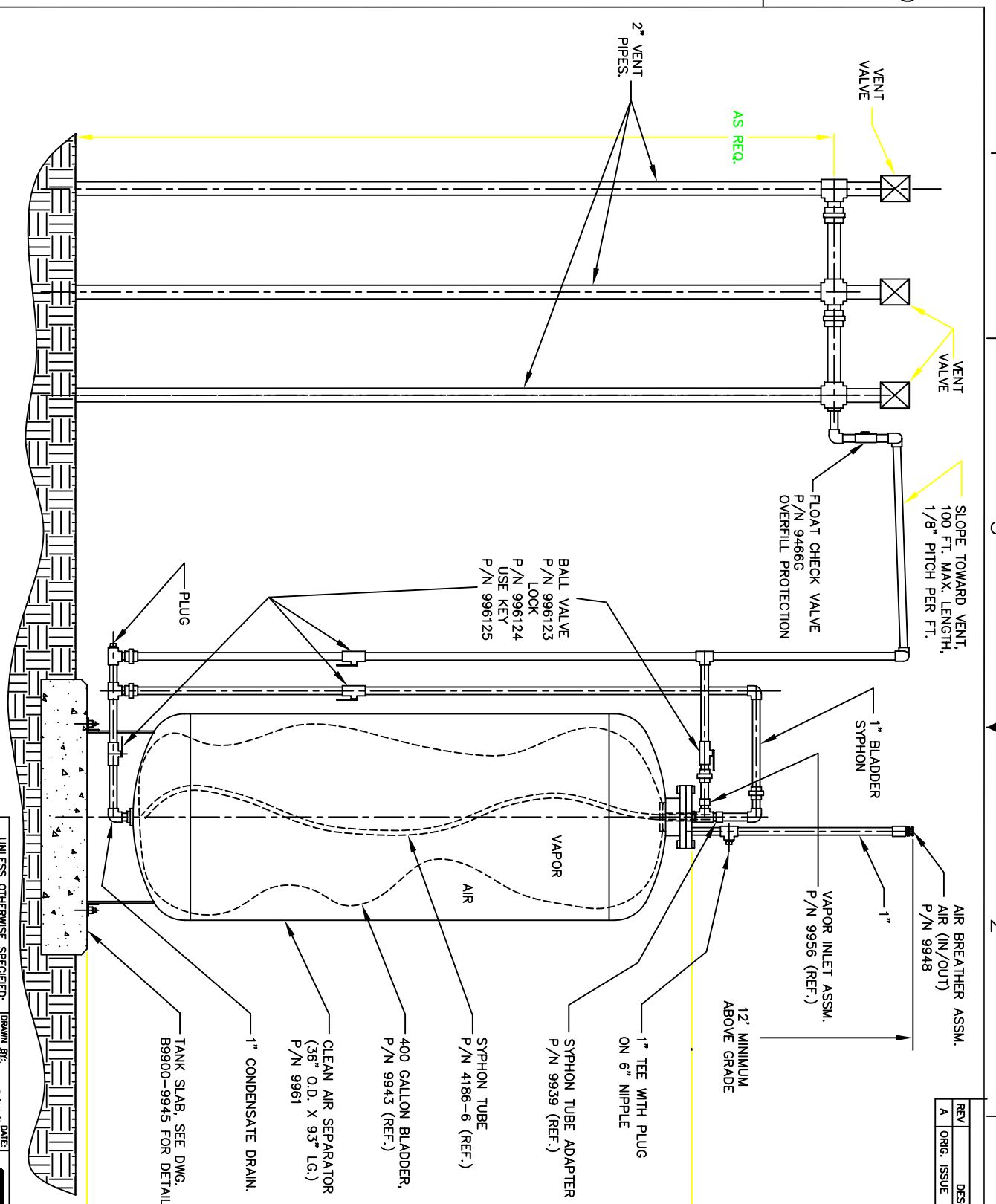
HEALY SYSTEMS, INC.
17 Hampshire Drive
Hudson, New Hampshire 03051

DWG TITLE CLEAN AIR SEPARATOR INSTALLATION (2 VENT VALVE)

SIZE	DWG NO.	REV
C	9900-9972	A

SCALE: 1" = 1 FOOT SHEET 1 OF 1

DWG NO 9900-9972 SH 1



NOTE:
1–ALL BALL VALVES (B.V.) TO BE UL LISTED AND HAVE PADLOCK FEATURE.
2–PASSIVE TANK PRESSURE CONTROL–NO ELECTRICAL POWER REQUIRED.
3–AIR BREATHER MUST BE INSTALLED AT A MINIMUM HEIGHT OF 12' ABOVE GRADE.

REVISIONS			
REV	DESCRIPTION	DATE	APP
A	ORIG. ISSUE	3/14/05	JWH

UNLESS OTHERWISE SPECIFIED: DIMENSIONS APPLY AFTER PROCESSING
TOLERANCES: X = ±.1, XX = ±.01, XXX = ±.005, ANGLES = ±1/2°
SURFACE FINISH: 125
INTERPRET DIM AND TOL PER ANSI Y14.5M – 1982
REMOVE ALL BURRS AND SHARP EDGES
DRAWN BY: JWH DATE: 5/14/02
CHECKED BY:
MATERIAL: –
TREATMENT: –
THIRD ANGLE PROJECTION

HEALY SYSTEMS, INC.
17 Hampshire Drive
Hudson, New Hampshire 03051

DWG TITLE: CLEAN AIR SEPARATOR INSTALLATION (3 VENT VALVE)

SIZE: C | DWG NO: 9900-9973 | REV: A
SCALE: 1" = 1 FOOT | SHEET 1 OF 1

DWG NO 9900-9973 SH 1